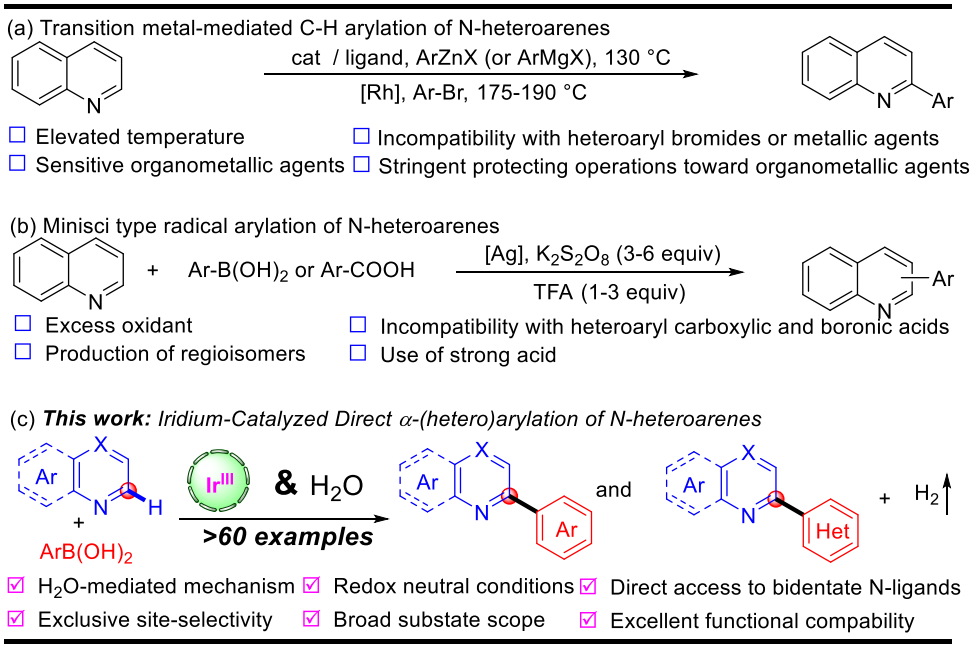
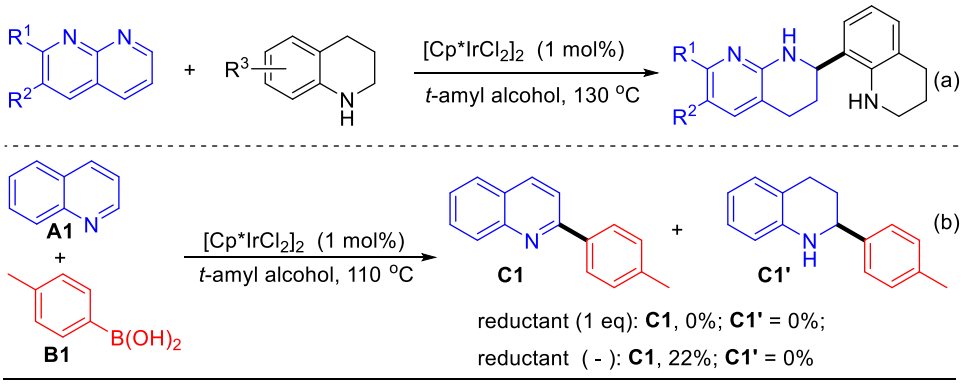
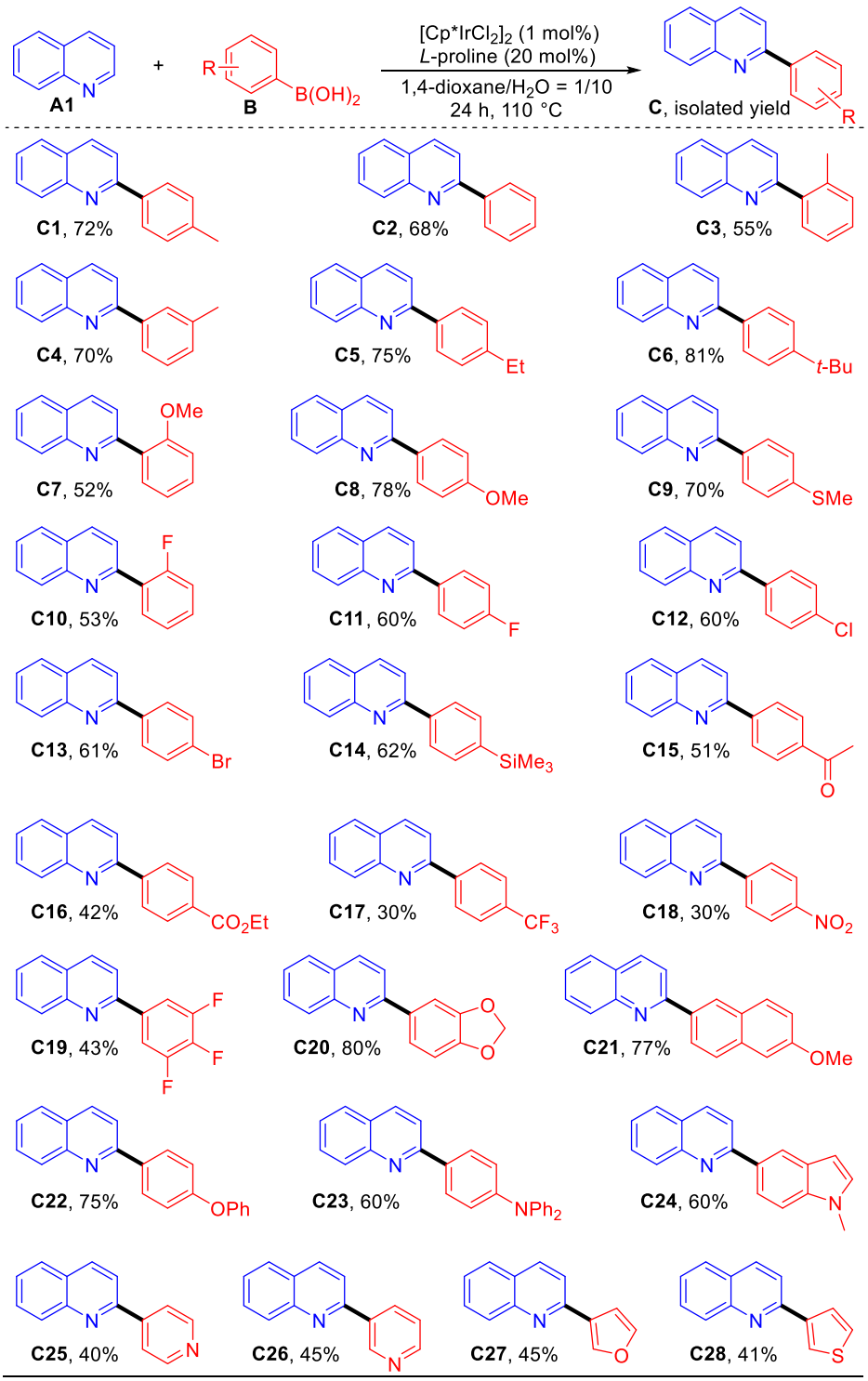


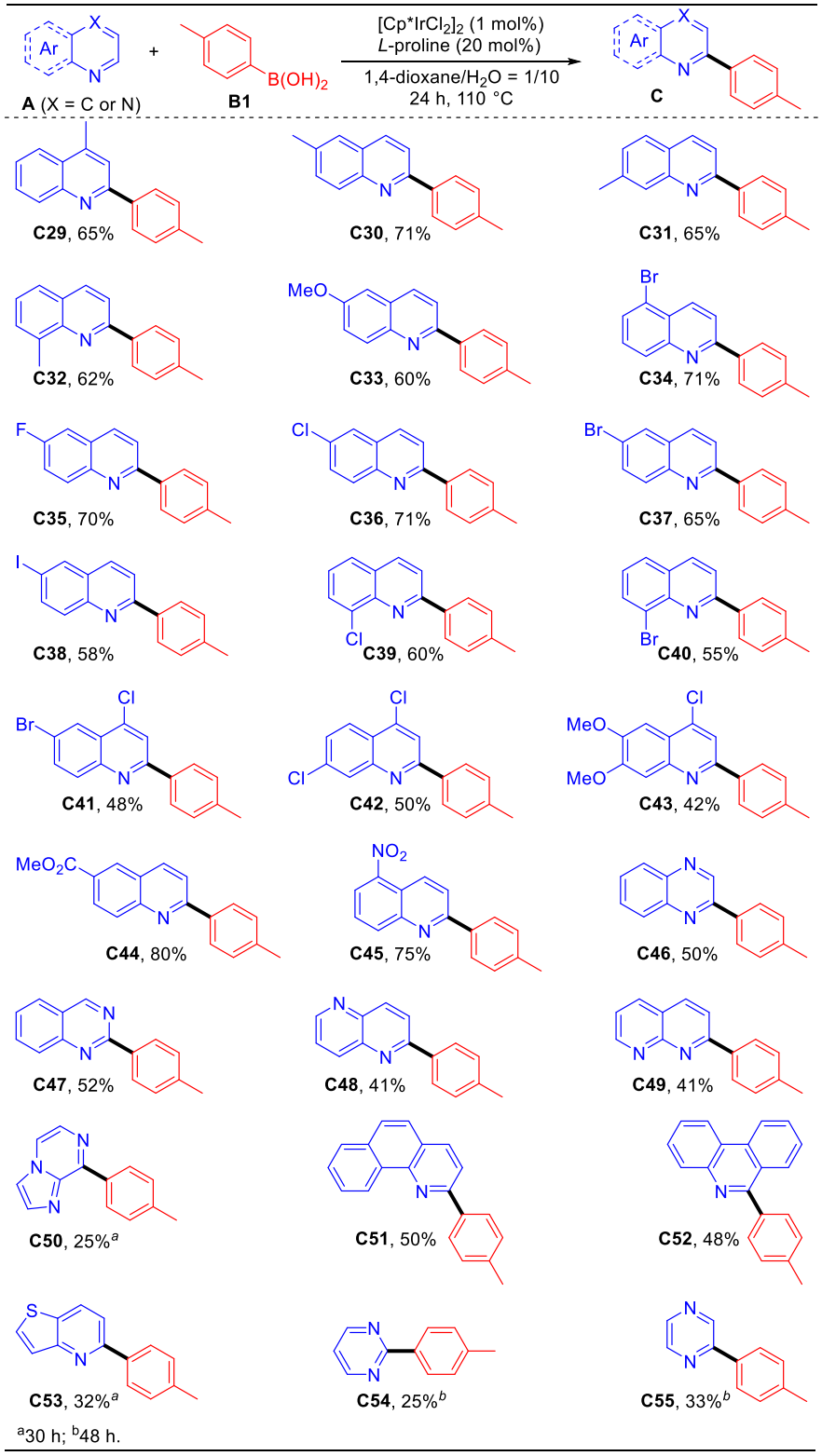
Scheme 1. The methods for access to 2-aryl N-heteroarenes.



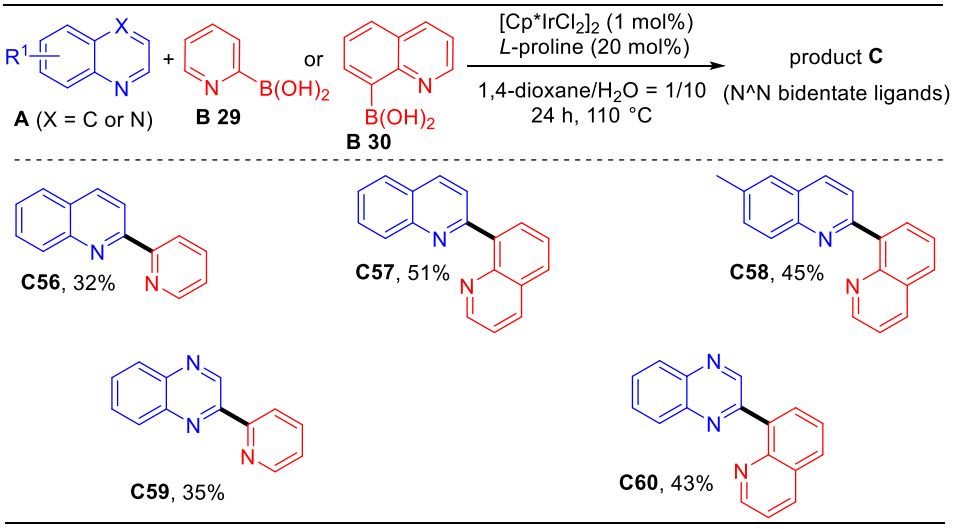
Scheme 2. New observation on direct *α*-arylation of quinoline.



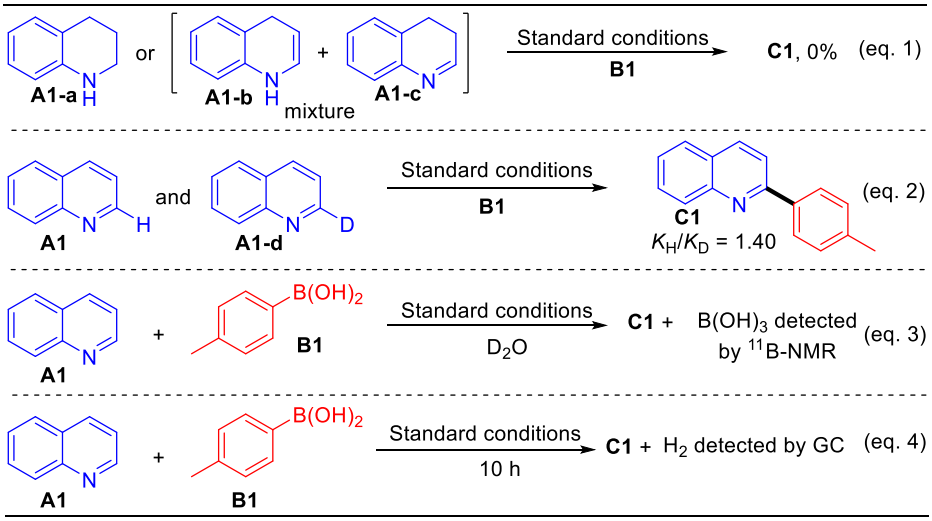
Scheme 3. Synthesis of 2-aryl quinolines by variation of arylboronic acids.



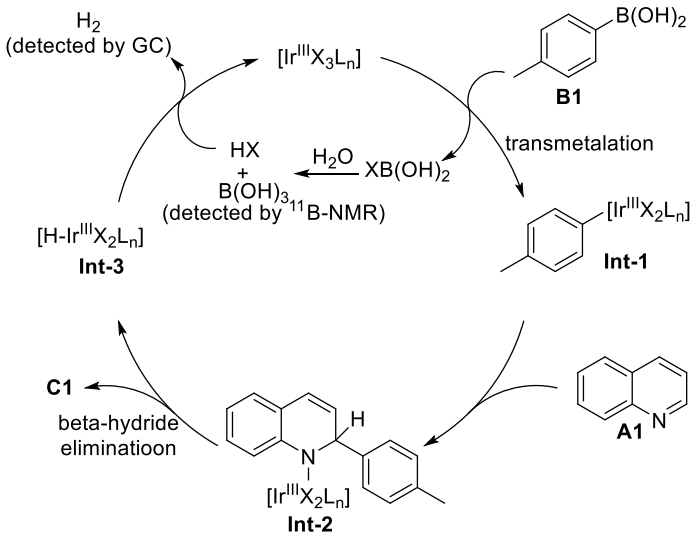
Scheme 4. Synthesis of 2-*p*-tolyl products by variation of N-heteroarenes.



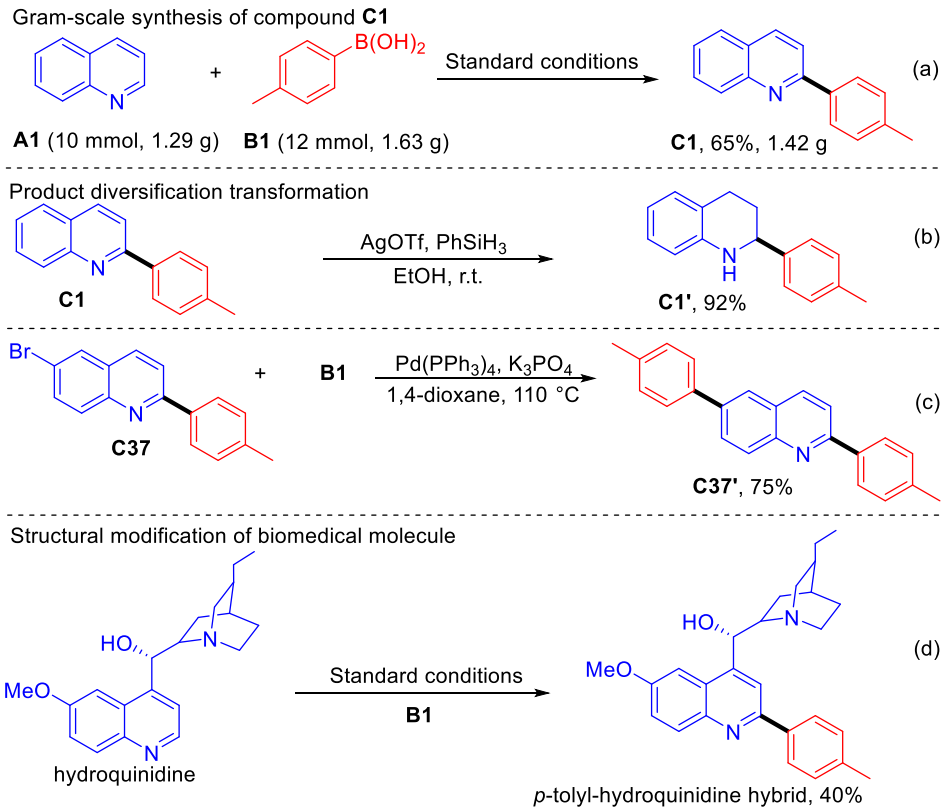
Scheme 5. Direct access to different N-bidentate ligands by *α*-heteroarylation of N-heteroarenes.



Scheme 6. Control experiments.



Scheme 7. Plausible reaction mechanism.



Scheme 8. Synthetic utility of the developed chemistry.